

1172. h. 4
2

Farther Observations

Upon the EFFECTS of
CAMPHIRE and CALOMEL.

UPON THE
EFFECTS of CALOMEL in the DROPSY.
Upon BATH WATERS.

AND
Upon the EPILEPSY.

BEING AN
APPENDIX

TO
ESSAYS upon these Subjects *formerly published.*

TO WHICH IS ADDED
A LETTER to Dr. ADEE,
Upon the EFFECTS of a Decoction of the ELM
BARK in *Cutaneous Eruptions.*

By DANIEL LYSONS, M. D.

BATH:

Printed by S. HAZARD, in *King's-Mead-Square*;
And Sold by J. WILKIE, in *St. Paul's-Church-Yard*,
LONDON; and by the Booksellers in BATH.

M.DCC.LXXVII.

[Price ONE SILLING.]

ADVERTISEMENT.

SINCE the following facts were printed, I have found that the calcareous earth mentioned as occurring in the Bath Water, and in the Springs round Bath, is nearly a natural quick lime, without that ductility which prevails in the artificial, occasioned by the fire used in its preparation; and that from this substance all kinds of stones, spars, limestones, and even the ores of metals, are formed, which differ from each other according to the various acids with which they are combined. Thus this natural quick lime dissolved in water, and joined to fixed air, produces limestone; by the addition

ADVERTISEMENT.

SINCE the following sheets were printed, I have learnt that the calcarious earth mentioned as abounding in the Bath Water, and in the springs round Bath, is nearly a natural quick lime, without that causticity which prevails in the artificial, occasioned by the fire used in its preparation; and that from this substance all kinds of stones, spar, selenite, and even the ores of metals, are formed, which differ from each other according to the various acids with which they are combined. Thus this natural quick lime dissolved in water, and joined to fixed air, produces limestone; by the

ADVERTISEMENT.

addition of another acid, *sui generis*, the limestone may be converted into flint, the flint again into agate, the agate into transparent chrystal, the clouds in agate being the lime remaining not sufficiently dissolved by the acid. If this natural lime in a state of solution meets with the acid fixt air, in caverns of the rocks, or other caverns, it forms spar, which hanging from the tops, or sides, of the caverns are called stalactites, the colours of which vary according to the metallic bodies, in a state of solution, impregnating them. When this lime in a dissolved state meets with the vitriolic acid, it forms that transparent flacky substance called a selenite, the form of which is usually a

ADVERTISEMENT.

a rhombus. When this natural lime dissolved in water passes through the rocks, without meeting with any of the various acids, and issues into the common air, the water evaporates, and leaves the lime in its first form; which is the substance I have mentioned to be often found in caverns, and springs, in and about Bath. That the stalactites in caverns, and even limestone itself, were formed from this substance I knew from my own observation upon the quarries, but for the philosophical manner in which they are formed I am obliged to Mr. Warltier's new experiments upon different kinds of air, which he lately exhibited, in a short course of ingenious lectures, at Bath.

Upon

ADVERTISEMENT.

Upon shewing Mr. Warltier specimens of incrustations upon sticks, collected from currents of the common springs arising in the hills round Bath, he assured me they never were in a state of solution with the water of the springs; but were an earthy substance, washed into the water-courses from the adjacent ground, and deposited upon the first solid substance it met with. This being the case, we may perceive why the incrustations upon Bath tea kettles feel so very smooth, the gross parts, undissolved in the water of the springs, either being deposited upon sticks, moss, or the sides of the water courses, whilst the water is running; or subsiding to the bottoms of the reservoirs when it stagnates.

FARTHER

ADVERTISEMENT

Upon viewing Mr. Watson's paper
of instructions upon the subject of
lectured from contents of the common
springs arising in the hills round Bath
he observed that they were in a
state of solution with the water of the
springs; but were an earthy substance
washed into the water-courses from the
adjacent ground, and deposited upon
the first solid substance it met with.
This being the case, we may perceive
why the incrustations upon Bath tea
kettles feel so very smooth, the gross
parts, undissolved in the water of the
springs, either being deposited upon
sticks, moss, or the sides of the water
courses, whilst the water is running;
or subsiding to the bottoms of the
reservoirs when it stagnates.

FARTHER



E R R A T A.

Page 6. line 19. *malignat*, *read malignant*.

P. 12. l. 23. *dissentient*, *read discutient*:

P. 25. l. 22, he *read the*.

p. 55. note l. 3. *Jalio*, *read Julio*.

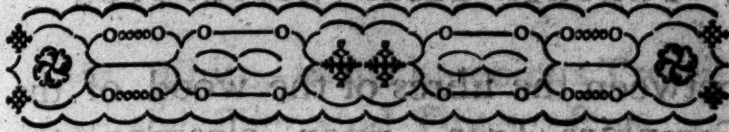
P. 56. l. 13. *sulphurious*, *read sulphureous*

P. 60. l. 17. *camplaints*, *read complaints*.

P. 73. l. 21. *dy*, *read die*.

P. 78. l. last, *asfertaining*, *read ascertaining*.





FARTHER OBSERVATIONS

Upon the EFFECTS of

CAMPHIRE and CALOMEL

I N

CONTINUAL FEVERS.

SINCE the last edition of this treatise, I have talked with a gentleman much conversant with the East-Indies; and who presided as chief of our settlement at Canton in China.—He says Camphire is much used, and in very great repute there as a Febrifuge, and that he himself has experienced its salutary effects: but, that it is only the Native that is used in Medicine, which he says they get from

A

between

2 FARTHER OBSERVATIONS UPON

between the fibres of the wood of the Camphire-Tree, upon cleaving the blocks.—That this Native Camphire is very scarce and of great value, but that the factitious is there esteemed of no consequence in Medicine, and never used.*—That this drug, however, is of very considerable efficacy, in the state in which it is brought to us, is I think sufficiently apparent from what I have already advanced: and no experience of my own, nor any intelligence I have received from the practice of others, have given me reason to retract what I have already declared, but, on the contrary, have tended to confirm my opinion, except in some rare instances where the constitution of the patients happened to be entirely averse to Camphire in any shape.

Mr.

* The greatest quantity of Native Camphire is brought from Sumatra where it is sold in small flat cakes at four pounds sterling an ounce. One pound of this Native Camphire is said to produce an hundred pounds of such as is brought to us after adulteration. Ives's Voyage to India, page 56, quarto.

Mr. White, in his ingenious Treatise upon the Puerperal Fever, says, the Fevers wherein I administered the Camphire were Ephemera; they were so, but I have every reason from their symptoms to believe, that they would have been of long continuance, had not they been seasonably checked by the Camphire.

Hoffman, as I have observed in my Essay on Camphire, esteems it to be the most subtle, penetrating, and least noxious drug in the universe: which pervades the most minute series of vessels, without increasing, but rather abating, the heat of a Fever, and farther says, that, not from theory or idle speculation, but from solid reason and experience, he recommends Camphire in Malignant and Petechial Fevers, and also against all such violent internal Inflammations as are productive of sphacelation.

4 FARTHER OBSERVATIONS UPON

In endeavouring to trace out the cause of this effect in Camphire, I have mentioned the seat of a Fever as existing in the purulent matter contained in the lungs of a consumptive person, and in an uncurable Ulcer in the Leg, and shewn in what manner such symptomatic Fevers may be removed, viz. in the first instance, by giving vent to the purulent matter from the lungs, and in the second, by amputation of the leg, when all other means of relief fail.

In proof of the first position I recited two cases from Willis, where, by means of setons, the purulent matter was drawn from the lungs, and the patients recovered of their hectic Fevers.—To these I have now the great satisfaction of adding a third.

Ann Martin, aged about fifty, supported by some charitable ladies, came under my care with an exceeding troublesome cough, which would not suffer

fer her to rest without opiates, which she was obliged to encrease; her expectoration was with great difficulty, she was emaciated to the greatest degree, and so weak, that she could not be taken from her bed.—In short, I looked upon her case as past all possibility of recovery from the internal use of medicine, and order'd a seton, in the manner recommended by Willis, between the ribs. This was cut by Mr. Nicholls her surgeon, and answered my most sanguine expectations; when the seton began to discharge the cough abated, and the patient observed that the matter, which came by the seton, was like what she had spit up: as the cough abated she recovered her strength, and flesh, and left off her opiates, and by means of this seton, and taking only a few lubricating medicines to assist expectoration; and lenitive electuary to take off the effect of her opiates, she recovered and I left her. Upon enquiring what became of her afterwards I find

6 FARTHER OBSERVATIONS UPON

find, that in some time the seton healed, after which she fell into a dropfy, of which she died in about a year after I attended her.

In these cases the purulent matter, which was the cause of the hectic Fever, was discharged by the seton.—The other case I have put is, where an ill conditioned ulcer in the leg is the cause of the Fever, and to be removed, only by amputation. These cases are brought to shew in what manner symptomatical Fevers may be removed when we know the part where the irritating cause of the Fever primarily exists: And hence I endeavour to shew, that Camphire, acting upon the stomach, (which I suppose to be the original seat of continual malignant Fevers) produces the good effects which we observe from it, when taken at the beginning of these Fevers.—But the following case, which I received from Mr. Bath, whom I have before mentioned in this work, will put

put the immediate operation of Camphire as an antiseptic in a more conspicuous light.

James Tucker of High-Littleton, in the county of Somerset, aged thirteen, rather of a tender make and constitution, on the 5th of Sept. 1774, broke both his legs, and one of his thighs in a coal pit. The fracture in each leg was compound. The head of the tibia in the left leg was broke off at the articulation of the ancle, about which part were several wounds.

In the right leg both bones were fractured, and the tibia protruded over the interior ancle near four inches, lacerating a wound more than three inches. The fibula came out just above, or partly through, the tendo achillis, nearly the same length, making a wound barely sufficient to admit the bone. A very great contraction of the muscles of the whole limb taking place, rendered the
reduction

8 FARTHER OBSERVATIONS UPON

reduction extremely difficult, which was however effected in about two hours after the accident.

From the first time of dressing, warm antiseptic applications, such as tinct, myrrh, cum, mell, rosar, &c. were used every twelve hours, together with a very strong decoction of aromatic herbs, and, as the approach of a mortification was much to be apprehended in so bad a case, I determined to try the antiseptic virtues of Camphire applied externally. With this view I dissolved four ounces of Camphire in a pint of rectified spirit of wine, half of which, with two ounces of spirit sal vol ammon, was used at every dressing, in the following manner; about six ounces were put in the fomentation, and the other four poured over a poultice of strong beer fœces and barley meal, in which the whole leg was wrapped up.

As

As to internal medicines, he was ordered to get down as much as he could of a decoction of bark and snake-root, in the proportion of one ounce of the former to half an ounce of the latter in a pint. Of this decoction he had taken three half pints by the middle of the second day, when he began to loath it.—From this time every thing went on for the worse: In the evening the wounds put on a morbid appearance, and had a cadaverous smell.—The patient the next morning nauseated food as well as medicine, had a faltering voice, sore throat, and very confused pulse:—Sphacelation began, and increased with such rapidity, that, before the evening of the fourth day, a discolouration of the parts had extended to within three inches of the groin, and seemed to threaten inevitable death.

In this alarming situation, where the patient loathed both food and medicine,

B

every

10 FARTHER OBSERVATIONS UPON

every thing depended upon external applications; they were continued to the eighth day, in the manner above mentioned, four ounces of Camphire being used daily, by which time the limb had resumed its natural colour, and all the morbid parts sloughed off.

The fibula, as before mentioned, made its way through the skin at the back part of the leg, over the tendo achillis, but the mortification took place opposite the fracture on the outside, and, when sloughed off, left a clean wound five inches in length, and three in breadth, the above bone itself appearing bare for the same length. The wound where the tibia forced itself through the integuments was not much enlarged by the laceration, the lacerated parts only coming away, so that that bone was not bare above two inches and an half.

In this alarming situation, where the patient lost both food and medicine,

So great a loss of muscular flesh on each side of the leg, and the necessity of lifting it at every dressing, (which was now reduced to once a day, and the dressings used less warm;) rendered the union of the broken ends of the bones utterly impossible; so that, until there was a new supply of young flesh, they were continually sliding from, and riding over each other, which was the case for more than a fortnight from the beginning. Nor did the tibia unite, till the limb, being secured by means of a thin deal splint conveyed under it, and the knee a little bent, was left at rest, and, with as little motion as possible, dressed only once in two or three days: but after the tibia was got tolerably firm, and the leg could be lifted with more ease and less danger, it was then again dressed every day.

The fibula grew black, and continued loose to the 23d of October, when six inches of it were taken away, near

12 FARTHER OBSERVATIONS UPON

four of which was the whole and entire substance of the bone.—Three or four days afterwards, there was an exfoliation of the lower fractured part, about an inch in length, since which time there has been nothing worth observing but a daily amendment; nature having amply supplied the great loss of bone, so as to render the limb almost as tightly as ever. Several considerable exfoliations from the fractured bones in the left leg were discharged by the wounds there, but the fractures in the thigh and that leg, were both perfectly healed without any thing extraordinary happening in the course of the cure.

This case evidently tends to confirm the operation of Camphire as an antiseptic, and perhaps, from the following observations, we may be led to conclude that it derives this virtue from its sedative quality. This drug has long been used externally as a disientient in bruises, and other obstructions of the circulating fluids,

fluids, and its good effects supposed to arise from its very sensible pungency, and evident volatility; by which the torpid fibres being roused to action, the stagnating fluids were set in motion, and carried into the circulation, whence the complaints were removed: while on the other hand the internal, or external, application of opium as a sedative has been esteemed very contrary to the intention of cure in such kind of complaints, and hence was entirely out of practice wherever a stagnation of the humours took place: Upon this principle its internal use was forbid in Fevers which shewed any tendency to putrescence, and looked upon as poison where any sign of mortification appeared externally; and though it was sometimes used externally by some of the old surgeons in sphacelations, yet warm aromatics were always joined with it, either by fomentations, or in the composition of cataplasms.

01 The arguments, used upon these oc-
 casions were very specious; but subse-
 02 quent experience has shewn they were
 founded upon false principles; for it
 now appears, that the obstructions in
 these cases are often occasioned by irri-
 tation upon the parts, and this being
 taken off by opium the stagnating hu-
 03 mours are thereby set free. Of this *Dr.
 Lind gives us several very strong instan-
 ces in the cases of intermitting Fevers.
 He says "I am clearly of opinion, that
 "it is the hot fit, or Fever which not only
 "often endangers the patients life, but
 "also in the most common cases of in-
 "termitting Fevers, by its continuance
 "weakens, and impairs his whole ha-
 "bit of body.—For this Fever I have
 "been so fortunate as to discover a
 "remedy which generally in a few
 "hours brings on a perfect and com-
 "pleat apyrexia.—This remedy he
 "tells us is opium, the effects of which
 "are,—1st it shortens and abates the
 "fit;

04 On hot countries, P. 313.

fit; and this with more certainty,
 than an ounce of bark is found to re-
 move the disease. 2dly it generally
 gives a sensible relief to the head,
 takes off the burning heat of the Fever,
 and occasions a profuse sweat. This
 sweat is attended with an agreeable
 softness of the skin, instead of the dis-
 agreeable burning sensation which
 affects patients sweating in the hot fit,
 and is always much more copious
 than in those who are not under the
 influence of opium. 3dly it often
 produces a soft refreshing sleep to a
 patient tortured in the agonies of a
 Fever, from which he wakes bathed
 in universal sweat and in a great mea-
 sure free from all complaints. An
 intermission being thus obtained the
 bark prevents a return.
 In such cases of intermittents it is
 doubtless the sedative quality of the
 opium that takes off the restlessness and
 other troublesome symptoms in the hot
 fit.

fit of an ague: And Mr. Pott in his
 ohirurgical observations lately publish-
 ed informs us, that, if taken to the
 quantity of 4 or 5 gr. in a day, it is as
 successful in removing mortifications
 of the toes, but that its effects are not
 so certain in other kinds of mortificati-
 ons. These observations of Mr. Pott
 confirm the observations made by Dr.
 Le Cat in a letter read before the royal
 society the 9th of March, 1748, wherein
 he speaks of these mortifications of the
 toes as dry gangreens attended with
 pain, occasioned by an interception of
 the flow of the blood and spirits to the
 part. Spirituous and aqueous topics,
 impregnated with volatiles, charged
 with saline, active, violently stimulat-
 ing particles, and others in use in ordi-
 nary gangreens, are to be avoided as
 deadly poisons. Dr Le Cat gave inward-
 ly in the morning, broths of Vipers,
 and of Cray fish prepared with ptopar
 herbs, and above all with water crocus:
 and in the evening (what according to

Mr.

Mr. Pott's remarks, must have been the principal medicine) a bolus of theriaca. Externally, Dr. Le Cat recommends a poultice made of herbs and farinas emollient, resolving and aromatic, the suppurative ointment, and storax. Mr. Pott says, the best outward application is a poultice made of flour of linseed with milk, or water, with ung. sambucin. or hogs lard. By these anodyne remedies, the spasms, occasioned by irritation, are relaxed, and the obstructions removed. Camphire, agreeing with opium as a sedative, we must suppose, takes off irritation upon the same principle. We are not, however, to look upon either Camphire, or opium, as a specific to remove irritation in all cases. Some rare instances have arisen, where each of them have proved the cause of irritation in different subjects: at some times, as I before observed, one takes no effect as a sedative, the other does: and at other times, especially when a sweat is intended to be procured, they act

C

with

with most effect joined together. Practitioners most conversant with lunatics inform me, that this last method of administering these drugs succeeds best in removing those horrors and restlessness with which insane persons are frequently distressed.



FARTHER

[19]



FARTHER OBSERVATIONS

Upon the EFFECTS of CALOMEL

In the D R O P S Y.

THE number of Cases I have cited to shew the effects of Calomel in Dropsies may seem to render any addition to them unnecessary: However, the two following contain so many curious particulars, that I should be inexcusable if I omitted this opportunity of offering them to the public.

Extract of a letter received from Dr. Monsey, dated Chelsea College, 15th May, 1772.

FARTHER

C 3

The

“The Boy, who took the Calomel, was in the most confirmed Dropfy I ever saw; swelled all over to an amazing degree. If his thighs made the least pressure upon the abdomen he was expiring for want of breath. He made not a small glass of urine in twenty-four-hours, and that very inflammatory, with an high colour'd sediment half way up the glass, no appetite, but, what is rather uncommon, very little thirst; I believe partly arising from insensibility, the powers exciting thirst being deadened. He had not uttered one word for five or six days. He had taken several of the rough drastic cathartics, without the least visible effects. Whether his Apothecary had done him the justice to try him with that class of medicines which pass under the name of diuretics, such as the Ciner. Genist.—Acet. Scillit. Rad. Raphan. &c. I have now forgot, if I ever knew. To cut the matter short, he was in extremis, I think, as much as I ever saw any body who recovered.

His

His mother had been expecting his death for forty-eight hours.

Here, I imagine, was full room to listen to Celsus's advice—*Anceps remedium potius quam nullum.*—So I made him up myself forty grains of Calomel into eight pills, by the assistance of the lady at whose house I was, (on the Sunday morning) with a full intention to attend the operation; but, just as I was setting out, I was called away into Norfolk, about thirty miles, to an old patient, with whom I staid three nights; and got home to Bury, where I then lived, on Wednesday evening.

On the Thursday I was desired by the lady, if my affairs would permit me, to come and put something into the boy, in lieu of what I had taken out. Curiosity carried me very easily; for I was more inclined to believe him dead, than that he could possibly

possibly be alive. I found him, indeed, if I dont make use of too strong a Catachresis, a living skeleton; but with a good appetite, a chearful eye, and a good pulse, and all excretions and secretions going on well: and, to cut the matter short, he soon got well.

Upon enquiry into the effects of the Calomel, I was informed that, he took one of the eight pills on Sunday morning at twelve o'clock, another at four, at eight, and twelve that evening, and at four, and eight, on the Monday morning.—At ten he called to his mother for the pot (the first word he had uttered for six or seven days) and filled it near half at once; and so, at small intervals, went on discharging his urine, very dark and turbid at first, then very yellow, till sometime on Tuesday evening; when he was quite emptied of, at least, all morbid fluids.

The

The family were astonished at, what they were pleased to call, the miraculous cure. I desired them not to be too sanguine; for, it was not at all improbable, he might fill again. He did so, in about a fortnight. The lady was his doctor: she proceeded in the same course, with the same effect. I called there just after the evacuation, and gave him bark, steel, vitriol, aromatics, &c. He got quite well; and two years after broke his neck from an ashen tree, in attempting to get a rook's nest.

The remarkable diuretic effect of Calomel, in this singular case, is somewhat similar to what Dr. Monro has observed happened to a patient of his fathers: where, by the administration of 2 or 3 mercurial boluses, an universal anasarca, and ascites were removed in the space of one night. The same effect of Calomel is also evident in the case of William Stratford, and others
already

already mentioned in my Essay on the Dropsy. But, in the case before us, the quantity given in so short a time, is different from any instance, I have even read, or heard of; no less than thirty grains being taken in a less space of time than twenty-four-hours, in doses of five grains each, with intervals of only four hours between the doses; yet no salivation ensued, but the whole operation was by urine. In the following case, the quantities of Calomel in the doses were less, and the intervals between them much longer, but their effects not less surprising:

On the 21st of August 1771, a young woman of a reputable family in Gloucestershire, felt a violent pain in the left side of her abdomen for three or four hours; after which it abated, and the next day she perceived a tumour about the size of her fist, in the same place where

where the pain had been. The parts affected continued sore for some days, and the pain now and then returned for a short time, but was by no means constant. The menses were regular before this happened, and so continued for some time afterwards: at length, water collecting in the abdomen it was distended by slow degrees, till the beginning of January 1772, when, being quite full, she was obliged to be tapped. She filled again, and April the 1st was tapped a second time, about thirteen or fourteen pints of water being drawn off at each operation.—April 16th I first saw her, when she was so very full of water, and the abdomen so tense and painful, that it was imagined she could go but a few days without being tapped a third time. The tumour was perceptible to the touch on the left side, was about the size of a young child's head, seem'd globular, and being suddenly pressed by the palm of the hand, receded from the hand, and returned to it again, as if

D

floating

floating in the water contained in the abdomen. The patient was now exceedingly weak, and thirsty, her breath very short, and she had had no sleep for several nights, her body was rather costive, and the stools black and foetid, the urine small in quantity, very turbid and bilious. The patient being in this deplorable state, I was consulted, and ordered as follows:

R Calomel. *gr.* iij.

Pulv. Contrayerv. comp. $\mathfrak{z}$ i.

Rad. Rhabarb. pulv. *gr.* x. m. fiat Pulvis.

Sumendus hac nocte hora somni.

Twenty grains of rhubarb were given in a draught the next morning, which produced three stools; the consequence of which was, that the tension of the abdomen was less, and the respiration more free. In the evening I gave her twenty grains of contrayerva, and five grains of nitre, in a powder, and ordered it to be continued every four hours.

April

April 18th, I found she had slept well the preceding night, and made a considerable quantity of water more than usual, I therefore ordered the powder to be continued three times a day, and directed five grains of Calomel and five of rhubarb to be made into pills, and taken on the morrow night, assisting this medicine, as before, with twenty-five grains of rhubarb the next morning. The Calomel and rhubarb were directed to be repeated after four days interval. Finding the water begin to gain ground, I directed a grain of Calomel to be given every night, a common purging portion once a week, a dose of compound powder of contrayerva with nitre morning and evening, and a dose of tincture of bark and steel an hour or two before dinner, upon the days she did not take the purge.

May 1st, By a letter from Mr. Williams Surgeon at Dursley, who had performed the operations of tapping,

and had attended the patient, I received advice that her thirst was lessened, more water made, and of a clearer colour, that her appetite was mended, that she was reduced an inch in circumference, and had gained strength sufficient to walk about the house; but that her feet and legs became anasarous from sitting up, and that the Calomel had caused a slight ptyalism. I therefore ordered the Calomel to be omitted, and May 8, heard from Mr. Williams, that she made more water, was lessened four inches in circumference, that her legs had not swollen since his last letter, that her thirst was much lessened, ptyalism almost gone, tension of the abdomen greatly abated, her appetite very good, breath greatly relieved, and that she had strength to walk about the house, and out of doors; and in another week she sent me word the water was almost all gone, but the internal globular tumour still remained very perceptible.

In

In this state I advised her coming to Bath; with an intention to try what effect bathing in the hot waters would have on the internal tumour, the water in which it had fluctuated in the abdomen being then nearly all evacuated; but before her arrival at Bath she began to fill again very fast, and was half full of water when she came; the tumour also was greatly increased to almost double its first size. May 22d I ordered Calomel *gr. ij.* and purged it off, after which I put her once in the bath, but the water increased so fast, or rather prevailed so much at her arrival, that I durst not pursue my intentions of using the Bath; and by June 3d tapping became absolutely necessary, when fourteen pints were taken away by Mr. Rundell, her surgeon at Bath. Cordials and restoratives were given, and as she was evidently filling again, June 11 she returned home with the following prescription:

R.

30 FARTHER OBSERVATIONS UPON

R. Calomel gr. iij.

Rad. Rhabarb. gr. x.

Conserv. Cynosbat.

Syrup. e Cort. aurant. ā q. s.

Fiant Pil. iv. sumendæ semel in septimana hora
somni.

R. Infus. fenæ commun. ℥ij.

Mann.

Tinct. fenæ à ℥ss.

Spirit. lavend. comp. ℥i. m.

Sumat mane proximo post bolum superscript.

R. Spirit. sal. vol. sal. ammoniac. ℥vi.

Nitri dulcis. ℥ij. m.

Sumat cochl. i minimum omni nocte et mane in
haustu. infusi summitat. genistæ, vel genistæ
spinosæ, vulgò dictæ *Gorse*, modo thææ ppt.

Outwardly I ordered Goulard's vege-
to mineral water to be applied with a
linen rag wetted. This purged, but
did not lessen the tumour, as Dr. Bur-
land, who attended the patient in the
country before I visited her, has since
informed

informed me, a saturnine plaister did, when applied by him at the first beginning of the disorder.

June 21st, I received advice of the patient filling again very fast, and June 27th, that the Calomel bolus and draught had a very good effect. At this time she began upon broom ashes steeped in old cyder, and by July 19th I was surprized, upon calling on her, to find the water evacuated, but the internal tumour increased, so as to fill the left side of the abdomen, and extend partly to the right, but it caused no pain; she looked florid and healthy, and, except weakness, and the tumour, seemed almost well. However she soon filled again, and August 21st, was so full as to be tapped a fourth time, when eleven quarts of water were drawn off. She was very low and languid all that day after the operation, with a febrile irregular pulse, and the next day apthous crusts appeared upon the tongue, and

and palatum molle, attended with a great foreness of her mouth. September 7th, I heard from her surgeon Mrs Williams, that the foreness of her mouth still continued, attended by a ptyalism, occasioned by the Calomel, but that her breath was not affected by it. I September 13th, her brother writes that the foreness of the mouth is gone, and her spirits better, but that she fills again with water very fast. The ptyalism had been carried off by cathartics, given as her strength would bear, and her strength supported by Huxham's tincture of bark, assisted by a soft nourishing diet; and the sores deterged and healed by proper gargles directed by the surgeon. As she now fills again with water after it had been evacuated six times, and it was very evident that the tumour had increased between every discharge, and as the Calomel had so violent an effect upon the teeth and gums that I could not venture to make
so

so free a use of it as I had done. I now had no hopes of removing the tumour, and consequently no expectation of radically curing the Dropsy. How great then was my surprize when, upon making a visit in the beginning of March, I found both Dropsy and tumour quite gone, and my patient so far recovered as to want only an emenagogue. Therefore March 9th, I ordered her to take thirty drops of elixir of aloes in pennyroyal tea, night and morning; by which she recovered her compleat health, and is now as free from her former complaints, as any young woman in the country; the tumour and Dropsy having now been removed six years.

The account she gives of the final departure of her disorder is as follows, viz.—That, there being no hopes of her recovery, she eat and drank what she liked,—that she filled with
E water,

water, and, about the 20th of September, began to sweat at nights; these sweats continuing every night the abdomen subsided, till all the water was evacuated; and the internal tumour only remained; which however was so very large as to cover greatest part of the abdomen, and make the patient appear still dropical, though that was not the case.—That in about five or six weeks she felt a violent pain all over the abdomen, which continued for three days, and left a great soreness in the part, just within the skin. This soreness continued about a week, after which the tumour began to subside, and gradually lessened for three months, by which time it was entirely vanished. I very particularly enquired whether there was any sensible evacuation by stool, urine, or any other way, but she observed nothing of that sort.

In considering this case it appears that the first symptom of disease was a
severe

severe pain in the left side, which after three or four hours abated. That the next day the patient perceived a tumour, about the size of her fist, in the place where the pain first began, and that, for some few days afterwards, she found now and then a transient pain, and a constant soreness, but that this also went off in a short time, and no symptom of disease then remained but the tumour: she recollects that her abdomen began to enlarge soon after she perceived the internal tumour, but had then no suspicion of a Dropsy: however she continued to increase, and in the beginning of Jan. 1772, was so full of water as to be obliged to submit to the first operation of tapping. The medicines ordered by her physician afforded some relief, but April 1st she was obliged to be tapped a second time. The third time she filled, the water was discharged by the medicines above mentioned. The fourth time she was relieved

relieved by tapping. The fifth return of
 the Dropsy was removed by medi-
 cines as above. The sixth by tapping,
 which happened just that day twelve
 month upon which she found the first
 symptom of disease. The seventh and
 last attack of this disorder was removed
 by sweating. From these circumstances
 I endeavour to account for the cause of
 this disorder thus: From the pain felt on the left side of
 the abdomen, previous to the internal
 tumour being perceived. The tumour
 being perceived the next day, and the
 abdomen beginning to fill with water
 directly thereupon, and the water thro'
 seven times evacuated, still constantly
 returning again until the tumour finally
 vanished, leaves us no room to doubt
 but that the Dropsy originally proceed-
 ed from the tumour, and it is reasonable
 to suppose that the tumour itself took
 its rise from a disorder in the left ova-
 rium. The pain felt I apprehend to be

he from an inflammation of the part, and that in consequence thereof one of the ova became enlarged, which was the globular substance perceived floating in the water contained in the cavity of the abdomen, but whether this tumour was separated from the ovarium, or remained attached to it, may admit of some doubt. The freedom with which it floated would incline one to the first opinion, but then how shall we account for the violent pain felt in it previous to its dissolution? and besides, it was always to be felt on the left side, but not on the right, until it was so enlarged as to cover the left side, and extend into the right. (That the internal tumour was specifically lighter than the water in which it floated was evident, by its retrocession and returning to the hand upon pressure,) but some doubts may be raised as to its figure, which after the two first operations of tapping, and before

fore the third, was to the touch evidently round, but after the water was a third time drawn off was so very perceptibly flat that its edges might plainly be felt extending over most part of the left side of the abdomen, and into the right. Hydatids found in the abdomen by dissections have, I believe, always appeared globular; but in the present case the tumour, after the third operation, seeming to be flat, will not, I apprehend, prove that this tumour was not an hydatid, or by any means invalidate an opinion entertained, that the original of this patient's disorder proceeded from a diseased ovary.

From dissections it appears that, when an ovary becomes diseased its coats often thicken as it enlarges, and but little fluid is found contained in its cavity. At other times (indeed generally) the coats of the diseased ovary are found exceeding thin, and containing a large quantity of fluid. The diseased

ovum

ovum is sometimes separated from the ovarium, and sometimes remains attached to it. Instances of the first are not uncommon, and I saw a remarkable instance of the latter in a patient of mine at the Gloucester infirmary, who, dying after her return home from the hospital, the body was opened by Mr. Cheston. This patient being emaciated, after the water of the ascites was discharged by a similar course of medicines with that used in the present case, an unequal rough substance was plainly to be felt in the abdomen on the left side, and excited my curiosity so far as to get intelligence of the patient's death, and go nine miles to see her opened. The scabrous tumour proved to be indurated ova of various sizes, some as large as a pidgeon's egg, others less, and all connected with, and firmly attached to, the ovarium.* The integuments of all were much thickened, and some contained a thick fluid, others none at all. Now

* See CHESTON'S Pathological Inquiries, P. 56.

Now, as the coats of diseased ova are found of such different densities, may we not suppose the coat of the same hydatid to be of different densities in different parts? And that the ovum in the present case, being small, and its coats thick, when the two first operations of tapping were performed, did not receive a sufficient pressure from the abdominal muscles to burst it; but that, being greatly enlarged, and its coats in some parts thinner, at the time of the third operation, the abdominal muscles had then sufficient power over it to burst it as the circumfused waters were drawn off, after which the indurated parts were to be felt flat?

At the third operation a doubt arose whether it should be performed at the usual place on the left side (in which case the tumour must unavoidably be perforated) or whether it should be performed on the right side, where there was a sufficient depth of circumfused

used water to prevent the tumour being touched by the trocar. Mr. Ford of Bristol, who had seen the patient, and Mr. Rundell surgeon of Bath, who performed the operation, were both of the same opinion with myself, that the tumour was a cyst, containing a fluid, and ought to be perforated, and consequently that the operation should be performed, as usual, on the left side; but as Mr. Ford thought it a curious case he desired me to beg the favour of Mr. Sharp to give us his opinion. Mr. Sharp was for performing the operation on the right side, because he said what we apprehended to be a cyst might not contain a fluid, or, if it did, it might burst, and discharge its contents during the operation; but if it did not, we should be more certain whether the tumour did, or did not, contain a fluid, after the water diffused in the abdomen was drawn off; and that then, if it remained, and a fluctuation in it was felt, the trocar might be immediately thrust

F

into

into it. Upon this very judicious opinion the operation was performed upon the right side, and succeeded happily. As this is a curious anecdote in surgery, I am glad to take this opportunity of mentioning it, and at the same time acknowledging my obligations to Mr. Sharp for his friendly assistance.

As to the removal of the tumour, I apprehend that that, and the sweats, which carried off the last load of water, were both occasioned by the Calomel. For though none had been taken after the last time of tapping, yet that its stimulus still continued acting upon the habit appears from the soreness of the mouth, and gums. Upon the whole then it is evident, that the Calomel acted as a powerful diuretic, in carrying off the water, repeatedly, when it did not affect the tumour; that, being continued, it opened the pores of the skin, and discharged the water by that emunctory; and

and lastly, that it excited an inflammation in the tumour itself, which coming to suppuration the matter was either absorbed, or evacuated by urine, or stool, though the patient, not being apprized of it at the time, took no notice of it.



FARTHER OBSERVATIONS

U P O N
BATH WATERS.
 I N an Essay upon the Dropsy, and in an Essay upon Diseases of the Liver, I have mentioned the use of Bath waters. Since my former publication I have had no reason to alter my sentiments of them, and have only a few more observations to add to what I have already delivered upon this subject.

The heat of the water issuing from the spring at the Cross Bath is by every body allowed to be several degrees less

less than the water issuing from the springs of the Hot, or King's Bath: but those who have made experiments with the waters of the two last have differed greatly in their reports of their respective heat; some asserting the water of the Hot Bath to be at *all* times hotter than the King's, and others allowing that it might formerly be so, but that now the King's Bath water is certainly the hottest. By experiments I have often made, at different seasons of the year, I have always invariably found the Hot Bath two degrees hotter than the King's. I have tried them at the pumps and at the sources, when opened to be cleansed, and find the heat at either place not to vary half a degree; provided the pumps have been constantly kept going for a considerable time; and that their respective heats are at the Hot Bath 116, King's Bath 114. A quarter of an hour pumping will in general be sufficient, but in very cold weather it may require a longer time, to

46 FARTHER OBSERVATIONS UPON

to heat the leaden pipes of the pumps sufficiently so as not to lessen the heat of the water. The thermometer I used was Farenheit's, made by Heath and Wing, the point of boiling water being 210. Now if a thermometer differently graduated be used, so that the point of boiling water is 230, the degrees to which the water will rise will be different, and the difference in their comparative heats will also vary. When we measure the heat of these waters it is therefore necessary to ascertain the scale of the thermometer we use, before we compare their difference of heat, or the correspondence of our own experiments with observations made by others.

The Bath waters are said to keep their heat longer than common water heated by fire, and this quality in Bath waters is by some ingenious writers supposed to proceed from their mineral contents. But upon experiments this
fact

fact does not appear to be really true, for if the heat of Bath water, and common water is the same, and they are exposed to the open air equally, they will lose their heat by equal degrees; but, if one is several degrees hotter, that which is hottest, of either sort, will lose a greater number of degrees of heat, in any given time, than that which is cooler, 'till they are both reduced to the same degree of heat, when they will be found to part with their warmth in equal degrees, 'till they are both reduced to the same temperature with the open air. This experiment I have tried, and found it answer, repeatedly.

A new principle has lately been supposed to have been discovered in Bath water, to which it's phenomena upon trial in various experiments as well as the chief of its effects, have been attributed by some modern writers; who have gone so far as to think they could imitate

imitate Bath water by collecting, and mixing with common water, a fixed, fixable, or elastic, air arising from a fermentation of certain minerals of contrary qualities, as chalk, or iron, with the mineral acid.

That the heat and virtues of the Bath waters arose from minerals fermenting in the bowels of the earth is an opinion supported by *Jorden, who takes a great deal of pains to prove how the expence of the fermenting materials may be supplied from time to time. That the heat and effects of the Bath waters do arise from fermentation is probable, but that the fixed air in their composition contributes in any great degree towards their production of such wonderful effects as we every day see produced by them is very much to be doubted, when we are told, by the very father of this doctrine of fixed air, that

* Dr. Jorden's discourse of Natural Baths and Mineral Waters, printed in 1633. Chap. 14.

that the Bath waters contain very little
of it. * I have already mentioned the re-
markable diuretic effects of Bath water,
which undoubtedly arise from the salts
which it contains. Lister says these salts
are common salt, and a calcareous ni-
tre. † A calcareous earth, in which this salt
resides, abounds greatly all round Bath,
and may be observed of a white or
yellowish, colour ozing from new stone
walls which are damp, and is sometimes
seen visibly rising in springs with the
water, particularly in one at Lincoln,
whence it may be taken out of the
water like soft chalk. This earth to-
wards the tops of stone quarries may be
found white, but being by the rains,
G or

* Dr. Priestly's Experiments and Observations re-
lating to fixed Air. Vol. 2. printed 1775. page 22.

† Lister de fontibus medicatis angliae, 1684. p. 44.

or subterraneous currents of water, washed deeper in the rock becomes fluid, and afterwards shoots into spar between the joints of the rock, or, if it ozes from the top of the cavern, forms icicles.

When I first began to observe the water of the common springs arising in the hills round Bath, I found it had the following apparent properties of bad water. It furred the tea-kettles, deposited incrustations upon sticks, or whatever hard substances lay in its currents, and did not lather readily with soap. Water with these properties produces the stone, colics, and other disorders of the viscera, but upon enquiring amongst the faculty, I could not find that these disorders were any ways remarkably prevalent at Bath, but rather the contrary: and, upon examining the incrustations upon the tea-kettles, found that the earth of which they were composed, being rubbed between the fingers,

felt

felt almost as soft as chalk, very different from what I had observed before; such incrustations being usually rough, and hard. This fine water is collected in reservoirs upon the sides of the rocks of freestone with which Bath is surrounded, and brought by pipes to serve the town.

To the diuretic effect of the water in common use at Bath, arising from its being impregnated with this calcarious nitre, as well as the salubrity of its air, being far distant from any stagnating water, may be attributed the general health of the inhabitants, and particularly that an ague is an uncommon disorder with us.

Spar was recommended, as a diuretic in the gravel, by Van Helmont, who has often been ridiculed for attempting to destroy one stone by adding the powder of another. There is however some reason from practice, as well

as theory of its diuretic effects, to conclude that his advice was something more than chimerical. In the neighbourhood of Mendip spar, reduced to a powder, is used by the common people to remove dropfies, and stoppage of urine. Hearing of this, I made enquiry at Chewton-Mendip, and found an old woman who sold the spar ready prepared, and an old man who said he had had a difficulty of making water removed by it. The quantity sold by the old woman in a parcel was about three ounces, of this they take a teaspoonful at a time in a cup of cyder. The man said he took two parcels.

Brydone, in his travels through the island of Malta, volume 1st. page 326, mentions a visit he made to the celebrated grotto where St. Paul was imprisoned, not far from the antient city of Melita. He says it is exceedingly damp, and produces (as he believes by a kind of petrification from the water)

a whitish kind of stone, which the natives assured him, when reduced to powder, is a sovereign remedy in many diseases. This powder is said, not only to be in great esteem amongst the Maltese, but many boxes of it are annually sent to Sicily, Italy, the Levant, and the East-Indies. About a tea-spoonful of this powder is given to children in the small-pox, and fevers. It produces a copious sweat about an hour after, and, it is said, never fails to be of service. Brydone says it tastes like exceeding bad magnesia, and he believes has pretty much the same effects. This I apprehend to be the *nitrum calcarium vel murale* of Lister,* and, taken in a smaller dose, would probably prove diuretic; it being the property of diuretics to prove sudorific, purgative, or emetic by their dose being increased; And hence the Bath waters, by means of this nitre in their composition,

* Lister de fontibus, 1684. p. 9, 31.

fition, prove in general diuretic, but sometimes diaphoretic, often purgative, and instances have happened, though rarely, when they have operated as an emetic.

I know very well, that what, after Lister, I call a calcarious nitre* has been said not to be nitre, but a Glauber's salt. I do not mean to dispute this point; all I would be understood to advance is, that to this salt, by whatever name distinguished, contained in the Bath water, are owing the effects above mentioned; and that from an impregnation of the same kind of mineral are derived the diuretic qualities of the water coming from the adjacent hills, and in common use in the City of Bath.

Thus

* Lister says it is the nature of calcarious nitre to melt in the fire without flame, and to rise up in bubbles. This exactly agrees with what I have observed of the residuum extracted from the Bath waters by evaporation.

Thus far we may, I think, venture to proceed in accounting for the diuretic effects of the Bath waters, by means of the salts contained in them: But, when we attempt to advance farther, we find ourselves entirely at a loss to account for the operation of their component parts taken separately. Bitumen, as a component part of the Bath waters, has been thought to give them their warming, invigorating quality, and so confident were the friends of this doctrine of what they asserted, that they said petroleum might be seen in the form of black cakes floating in the waters, particularly in the King's Bath. Lister denies any bitumen in the water but attributes the black substance above mentioned to a collection of sordes washed from the bodies of the bathers by the warm water.* Both these

* Lister says it is the nature of calcareous water to melt in the fire without being consumed, and to rise up in bubbles.
** De Bitumine in Thermis nostris Bathoniensibus Maio Junio et Julio natante, id totum ex corporum strigmentis fuisse affirmo, et aliud præterea nihil. Adde*

these opinions have been overthrown by the substance in question being proved to be a vegetable production, rising from the bottom of the Bath.* The doctrines that Bath waters are obliged to steel in their composition for their astringent qualities, and sulphur for their efficacy in cleansing cutaneous foulnesses have not met with a much greater degree of confirmation. The sand of the Bath, thrown upon any hot iron, does indeed burn blue, and cast forth a sulphurous smell, very small fragments of pyrites have been collected by myself from it, and the water itself, when fresh drawn, turns of a pale purple with tincture of galls. These observations would induce one to believe, that there is a martial, and sulphureous principle in the waters, but not a grain either of steel, or sulphur

A

quod iis tantum mensibus colligitur cum Thermæ maxime frequentantur. Lister, de fontib. page 104.

* See Dr. Charleton's Analysis of Bath Waters, p. 3.

has ever been gained from the water itself.

This being the case then, how can we say that it is to steel, or sulphur, that we must attribute the removal of this, or that complaint. It will be safer, with the elder Oliver,* to confess, that it is not to one, or other, of the component parts of the Bath waters that we are to give the honour of the almost miraculous cures we see effected by them, but to the admirable composition of the whole, where they are blended together in the most exquisite manner, far surpassing the utmost stretch of human invention either to imitate, or describe. Leaving therefore theoretical reasonings from first principles, let us enquire into their effects, and thence endeavour to trace out the cause of such wonderful cures as we every day see produced by them.

H

A

* Oliver's dissertation on Bath Waters, 1716, page 16.

38 FARTHER OBSERVATIONS UPON

A country girl, who was totally paralytic in her lower extremities, was recommended by me to the Bath Hospital, and admitted, upon the 20th of April, 1774. After using the waters internally, and externally, to the 19th of October following, she was sent home, as much a cripple as she came. Another woman, aged about forty, came to Bath three seasons, by my advice, for a rheumatic complaint in her left knee. She bathed, but chiefly used the dry pump under the direction of myself and Mr. Ditcher, and at last went home much out of humour with the waters, because, after being here three seasons, she had not obtained a cure of her complaint. Both these patients recovered after they left the waters, the first being able to walk several miles, and the other, who is a corpulent woman, and whose employment is the care of a very large family, being able to go with ease from top to bottom of the house without any assistance, whereas before she came to Bath,

and whilst she was here, she could not move about without a stick, or other assistance.

Had either of these patients at their leaving Bath taken any medicine, though ever so trifling and indifferent, the whole merit of their recovery would have been attributed to its effects, whereas the real cause of their recovery was (as Dr. Wynter has observed of these waters) a removal of the obstructions by the use of the waters, after which nature did her own business, and restored the parts to perfect health. Many instances similar to the above happen with us every year, as well as others where we cannot so easily form our conjectures of their happy effects. Of which kind is the following case, which contains so many extraordinary circumstances that I should not venture to relate, it were not the patient, his father, and mother living to attest the truth of it.

H 2

The

63 FARTHER OBSERVATIONS UPON

The CASE of THOMAS WEBB, *was*
taken from his Mother, the 6th of No-
vember, 1773.

THOMAS WEBB when four years
of age had the small pox, after
which he was observed to groan in his
sleep, and complained of not being
well, but made mention of no particu-
lar part being affected, until he had the
measles four years afterwards. The
measles were in a few days (viz. upon
Whitunday) succeeded by a very strong
burning fever, attended with colive-
ness, a difficulty of making water, and a
violent pain in his back, which conti-
nued for nine days. To remedy these
complaints solutive medicines, glysters,
and diuretics were administered: By
which means stools were procured, and
the inclination, but not the power of
discharging urine increased. In nine
days the pain ceased, after which he
had no stool, nor made any water, nor
had any inclination to either discharge,
and

and lost the use of his limbs: he was at the same time sick at stomach three or four times every day, but did not vomit.

Under these circumstances a very worthy and ingenious physician advised his mother to give him small glysters of about two ounces of oil two or three times a day. These glysters relieved his costiveness occasionally, and in this manner he went on to January 1769, but it is remarkable that, during all this long period of so many months, he made no water. Being thus oppressed by an obstinate costiveness, a total suppression of urine of many months continuance, and a paralysis of the lower extremities, he was bathed in a medicated bath at home, for eight or nine days, to no purpose. He was then, upon a Monday in January 1769, put into the hot Bath and continued in it for ten minutes, and by the next Saturday was able to walk with crutches, though before

before he went into this Bath he could not bear the least weight upon his legs, but was from his waist downwards as weak as a new born babe.—On the Monday following he was put into the Bath a second time, and repeated his bathing a third time upon the third Monday, at which time he, being in the hot Bath, drank a glass of the Cross Bath water, and, after being in bed about ten minutes, called for assistance to go to stool, which was the first natural discharge he had had that way for more than six months without a glyster.

From this time he continued bathing, and drinking the waters, his stools were natural, and in about six weeks his urine, which had hitherto been obstructed, passed freely in the natural way, and the use of his limbs was perfectly restored. After this recovery he enjoyed a very good state of health for a year, when his sickness at stomach returned, attended with vomiting, for which

which he drank the Bath water, and received a cure of his complaint. About the same time the next year he suffered a return of his disorder, and drank the Bath water with the same success.

From this time he continued well until the latter end of September, 1772; when, having eaten some rice pudding, upon a Friday, he vomited that evening, and the next morning drank the Bath water, as also on the Sunday morning following. The vomiting continuing, an attempt was made to clear his stomach by an emetic, given on the Sunday evening. This increased the vomiting, and nothing would afterwards stay upon his stomach. Upon the Monday morning my advice was asked, when, finding him as above related, and that he was colicive, I ordered Dr. Meads bolus recommended in the iliac passion, with a view to stop the vomiting by the opiate, and to open a passage by stool

with

22 FARTHER OBSERVATIONS UPON

With the purgative ingredients, and other similar attempts, not succeeding, emollient glysters, especially those of oil, were made use of, and occasionally continued. The glysters brought off some feces, but no medicine, I thought proper to administer, had any effect upon the vomiting.

Being now greatly emaciated, and weak as not to be able to move out of his chair without assistance, I advised his having recourse to his old remedy the Bath water, and more especially as all liquors he drank seemed cold upon his stomach. — The water of the Cross Bath was brought home to him, and being drank in small quantities he soon began to mend, and gain strength, and with it his appetite. His stools required the assistance of glysters of oil, but in about a fortnight he had received so much strength as to be able to walk to the Bath for his water. By degrees the glysters were left off, and in three weeks

weeks time all his complaints were removed by drinking the Bath waters. I ordered him once into the Hot Bath and it gave him one natural stool, but he afterwards required the use of glysters, and I thought bathing weakened him too much to repeat it at that time, and afterwards the costive habit being removed, by drinking the water only, it was not necessary.

After this recovery he continued drinking the water for some time, but has never since had any impediment to his health with regard to stool, urine, or any thing else, but grows, and is in all appearance very healthy.

In this remarkable case it appears that the fever attending the measles fixed upon the secretory organs of urine, and the alimentary canal; whence arose the costiveness, and obstruction of urine, attended with an increase of pain, and inclination to make water (without the

power of discharging any) upon diuretics being administered. This pain continued till the parts became paralytic, which disorder was at last, after many months, relieved by the use of the Hot Bath: the spasm upon the alimentary canal being first removed, and afterwards that upon the secretory organs of urine. That these waters have a power greater than common water heated is evident from this case, as well as others that might be produced: what it is that gives them this extraordinary quality I must confess myself ignorant. Some have thought that the salts contained in them render them more penetrating than other waters, but let it be what it will, the fact is notorious, to all who are much conversant with them, that they are endued with a power of removing many complaints which common hot water will not.

In this case it is to be observed, that no urine was discharged for between seven
seven

seven or eight months. It may naturally be asked what became of the urine, for so long a space of time, and by what emunctory was this excrement carried out of the body?

Urine has been absorbed from the bladder, and carried off by urinous sweats, and at other times it has been carried off by stool, as is the case with birds, who discharge their urine with their feces. This undoubtedly was the case in the present instance, as the young man's mother from the urinous smell of large quantities of liquid, which from time to time were discharged with the stools, upon the administration of glysters, is fully satisfied that the urine passed that way, whilst its natural passage was obstructed.

Further
FARTHER

Baker in the first volume of Medical
Transactions published by the College
of Physicians in London, 1751, p. 100.
more; and for this purpose wrote to
one of my Friends in Berkshire for the

FARTHER OBSERVATIONS.

to which, with a small bottle of the
powder, he sent the following par-
ticulars. — "In Epileptic cases, especial-
ly where the patient is adult, or of
"good strength, I always recommend
"the quantity of fifteen, or sixteen,
"grains twice a day, upon a clear sto-

MANY years ago I heard from
some reverend Clergymen in
Berkshire of the success they
and their wives had had in giving the
Flowers of the Cardamine powdered in
spileptic, and convulsive fits, especially
to children. This had induced me to
try this medicine formerly, and I
thought I had some success with it; but
not sufficient to prosecute its use.

Upon reading the account of the
effects of the Cardamine, given by Dr.
Baker

Baker in the first volume of Medical Transactions, published by the college, I determined to try its efficacy once more; and for this purpose wrote to one of my Friends in Berkshire for the method he used in giving it; in answer to which, with a small bottle of the powder, he sent me the following particulars.—“In Epileptic cases, especially where the patient is adult, or of good strength, I always recommend the quantity of fifteen, or sixteen, grains twice a day, upon a clear stomach. Some care is requisite in mixing it with a little of your wine or water, in a spoon to unite the volatile parts, that none may be wasted, and then wash it down with the remainder. An hour before rising, and the time of going to bed have been preferred to any others, in expectation of a gentle perspiration. If that can be obtained, or the patient can perceive a lively tingling in the extremities of the toes and fingers, you may

"may depend upon a cure." As to the preparation of this powder, I received the following account from the same gentleman, that the Cardamine was never put in the sun to dry, nor exposed to a stronger heat than being laid before a kitchen fire. He likewise informed me that the powder which came off first upon sifting was more effectual than what was produced upon sifting after a second trituration: the reason of which is that the greatest virtue exists in the tender petals of the flower, which are all reduced to powder in the first operation of bounding.

Although the method recommended for drying these Flowers is nothing more than what is generally directed in drying medicinal plants, yet in so material a case it more particularly deserves our attention, especially as what has been prepared in the shops has been found of less efficacy than what is prepared by my friend's lady.

Having

Having procured a phial of this powder I made trial of it with two patients in the Gloucestershire Infirmary. The case of Edward Williams I have already mentioned in my Essay upon the Epilepsy. The other was Hannah Willin, aged twelve years, who was admitted at the infirmary July 13th. 1769, having been ill ten months with an Epilepsy. The account which I received from herself and mother, of the origin of her disorder was, that being sent early in the morning to a neighbouring farm house for milk, she saw something black in the yard (supposed to be the shell of a large pumpkin) and, being exceedingly frightened at it, fell into a fit, and was carried into the farm house speechless. In this fit she lay an hour or more. A few days after she had a repetition of the fit, and again in the morning of Michaelmas day. She was then bled, but was troubled with fits all that day, succeeding one another. These fits continued
more

more or less frequent almost every day, and often many in a day to the time of her admission, but were observed to be most violent at full and change of the moon.

The symptoms observed to attend her fits after she came into the house were, that she fell down suddenly without any previous notice, she had general convulsions, the legs, arms, and eyes being affected; her hands were clinched, and she foamed at the mouth. These fits lasted about ten or twelve minutes, and she had several of them every day. Sixteen grains of the flos Cardamines were given at a dose, in a draught, being taken an hour before she rose. The fits soon left her after she began upon this medicine, so that in a fortnight, viz. July 27th I ordered, the use of the Cardamine to be discontinued, she having been entirely free from her fits for many days. August the 4th the measles appeared, she recovered with

with the usual treatment; and having continued perfectly well in September she was discharged home, having had no return of her fits, nor taken any more of the Cardamine.

In the latter end of August she removed from Bath to Bath, and upon arrival found that this girl continued free from fits for several months; but that she afterwards returned, and she was again admitted to the Hospital, where she took the Cardamine. There were no extraordinary effects of the medicine, and she had several of them since I resided at Bath. I have had several opportunities of trying the effects of the Cardamine. About thirty years ago, I resided then about thirteen, and had been troubled with Epileptic fits from twelve years of age, occasioned by the death of her brother, when she was very young. At this time she was harassed by these fits every day, and often several times in a day. Having taken

the gums, valerian, and other medicines, usually given in Epileptic cases, without success, she applied to me. A few doses of the Flores Cardamines, procured from my friend, put a stop to the fits, and afforded me an opportunity to make use of other medicines, which her case required. At this time going out to service, her fits returned in about a fortnight, after which she had recourse to the powders only, which her apothecary, by my directions, had prepared. She says that the powders always did her service; but that the fits often returned for almost a year, when by taking the powders when she had not, as well as when she had, the fits they entirely left her, and that she has now been two years free from them, except one fit, which she had about a year ago, upon the death of her mother.

A. H. aged near sixteen, had a fit about sixteen months ago. It came suddenly

suddenly, without any notice, as she was coming down stairs; she lost her senses, her hands were clenched, and she continued in the fit half an hour. About a fortnight afterwards, as she was at breakfast, she had another fit, which lasted about a quarter of an hour. From this time to the latter end of January last she had no other fit, but then, before breakfast, sitting with her mother, the mother observed her look ill, her eyes began to be convulsed, and upon falling into a fit her hands were inverted. She had three other fits afterwards, the last of which was so violent as to require three people to hold her. In this situation she applied to me upon the second of February, when by taking a few doses of the Flores Cardamines the fits were entirely stopped.

The Epileptic fits in this patient might have their origin from obstructions. But, if that was the case, it is to be remarked that they were removed

K2

by

by this medicine, which is esteemed rather friendly in such complaints; and proved eminently so in the present instance, this girl having taken no other medicine, and having been without fits, or any other complaint above four months.

T. A. a mason, aged upwards of 40, about four years ago was affected with catchings in his throat, grinding his teeth, rolling his eyes, and looked sometimes black in the face. These symptoms were observed by his wife, to whom he has been married thirteen years: But he was so insensible of what had passed, that he would not believe his wife when she told him he had fits in his sleep. He was affected in this manner for about a year. In the second year he fell down several times in the street, and in other places, in the day time, and often beat and hurt himself. About a twelve month ago, being at work upon a scaffold fifteen feet high

high, he fell in a fit to the ground, and was taken up for dead. At this time I first saw him, and with bleeding, a blister to his neck, and the Epileptic Powders recovered him so far as to go to work, but he had not his full strength to go through the whole day. From this time he continued free from his fits for a month, after which he had now and then one, and then continued free for six weeks, when the fits returning violently his wife came to me for more Powders, which stopped the fits entirely for some time, and he afterwards had them for some months irregularly, until at last they came every night for four nights successively, and he did not recover the use of his intellects in the day time. Upon repeating the Powders the fits were immediately stopped, and the man again enabled to go out to work. In this manner he still goes on. When able to work, and the fits come but seldom, I hear nothing of him, when they return with violence his wife comes for some Powders.

If this patient would take the Powders after his fits have left him, and now and then repeat them, though no fits should return, I cannot but imagine that he would be entirely recovered from them. My reverend friend, who is now removed from Berkshire to Gloucestershire, tells me that all kinds of fits give way to these Powders, and from his testimony, the cases published by Dr. Baker in the 1st volume of the medical transactions, and my own experience, I cannot but think that, if properly administered by the faculty, and directions properly observed by the patients, these Powders might be as much to be depended upon in Epilepsies as the bark is in the ague. A due degree of attention in the preparation of this medicine, and a reasonable perseverance in its use, after the fits have ceased, appear to be the chief requisites for ascertaining its virtues.

A



A

LETTER to Dr. ADEE:

Read at the College of Physicians in *London*,

OCTOBER 31, 1770.

S I R,

THE College of Physicians having in the first volume of the Medical Transactions, expressed their desire of receiving such observations as may tend towards perfecting the history of diseases, or ascertaining the effects of medicines; I beg leave by your means to communicate to them the effects of a decoction of the inner bark of the common

mon elm in cutaneous diseases. This I first took notice of at St. Thomas's Hospital, and from a number of cases I there observed, have selected the following; in which the effects of this medicine appeared most conspicuous, very few others being joined with it.

ANN MOONEY was admitted, September the 4th, 1755. She had been subject to itching eruptions on her arms and thighs for several years. They appeared in autumn, continued in large patches all the winter, and disappeared in the spring. In this state she came to the hospital, and was put upon the elm decoction, taking half a pint twice a day with nitre dissolved in it. October the 2d, the eruption was manifestly diminished. October 21st, the patient's skin was quite smooth, and she was discharged cured, having taken the decoction the whole time of her continuance in the hospital.

She

She was ordered no other internal medicines except a calomel bolus October 2d, and some emenagogues October 14th, which in two days became unnecessary. Externally she used a sulphur ointment, when first admitted, but after a few days it was exchanged for the common cerate, as the itching of the eruptions were increased by the former. A decoction with mint, twice a day.

Francis Wyer was admitted October the sixth, 1735, having a red itching eruption, covered with a furfuraceous substance, dispersed in large patches all over his body. He was ordered a calomel bolus twice a week, and half a pint of the elm decoction twice a day, and outwardly an ointment with white hellebore. At first the ointment increased the itching; but being tolerable it was continued. December the 23d, the patient's skin was in all parts smooth, and he was discharged cured.

Richardson
L.

Richardson Martin was admitted October the 10th, 1755, being covered with a dry white scurf all over his face, hands, arms, legs, and body; in short, from head to foot he was a compleat leper. His legs and thighs were swoln, and painful, except when placed horizontally; and large pustules broke out in several parts of his body. He was ordered to take half a pint of the elm decoction with nitre, twice a day. And October the 21st, he had a purging bolus, with ten grains of calomel, which was only once repeated. These were all the medicines he took. October the 27th, the leprous scales fell off, some of them as big as a man's hand, leaving the new skin as fresh and red as under a blister. November the 25th, the skin was perfectly smooth, the leprosy being intirely removed, and the patient compleatly cured.

Observing these great effects of the medicine in the hospital upon patients, seldom,

seldom, if ever heard of after their discharge, I determined to make use of the first opportunities that offered, to find out whether such cures were permanent, and had the satisfaction to observe, that although they were rarely entirely effected at the first retreat of the disease, yet by persisting in the same course, at proper seasons, for some time, a compleat victory might generally be obtained, as will appear by the following cases.

Ann Gardner, a poor day labourer's widow, of Hempstead, near the city of Gloucester, in the spring of 1756, aged 63, came to me for advice, having been troubled with an eruption upon her skin every spring and autumn for twenty years. The original cause of this complaint she attributed to drinking a quart of cyder, when hot with work in the time of corn harvest. After drinking it, she had a shivering fit, and could not get home without assistance.

tance. She was ill all the succeeding winter, and in the spring following had an eruption all over her body, but chiefly on her back. It receded in summer, but appeared the next autumn, and afterwards every spring and fall in various parts of her body, until she applied to me, at which time it was upon her arms. The arms were excoriated from the elbows to the wrists, and discharged an ichor, which obliged her to keep them constantly covered with cloths, to absorb the moisture.

A decoction of the elm bark was prepared and sent her, of which she drank constantly half a pint twice a day for some months, and the eruption disappeared. The next autumn the efflorescence shewed itself in patches in all parts of her body, which giving her an ill opinion of the medicine, which she imagined had made her disorder more general, she followed the advice of an old woman, and smoked tobacco.

The

The eruption disappearing as usual at winter, she thought it the effect of the tobacco, especially as she observed that her saliva discharged by smoking, tasted salt: wherefore she continued the use of her pipe all the winter.

In the spring following her old disorder returned, and fixed upon her breasts only, the rest of her body being clear. The breasts were excoriated, and discharged an ichor, in as violent a manner, as the arms had the year before; which, from the part affected, made her believe she had a cancer.

In this state she most willingly began again upon the elm decoction; and promised to continue it as long as I thought proper. After drinking it as before, for some months, she left it off in June, her breasts having been well for six weeks. In September following she began it again, though no eruption appeared, and continued it till near Christmas

Christmas, when she lost it off entirely; no eruption ever afterwards appearing, to the day of her death, which happened in the spring of the present year. Externally the linimentum album only was applied both to her arms and breast.

John Heard, of Hempstead, aged thirty-four, applied to me in the spring of the year 1757, for a cutaneous foulness, which had appeared upon him annually every spring and fall for seventeen years. The account he gave of its original was, that, being hot and weary with mowing in summer-time, he laid himself down on the ground to rest, and took cold; and that in the following autumn the eruption first made its appearance about his waist. Some externals being used, the disorder went off; but returned with great violence in all parts of his body the next spring.

Upon

Upon application to Mr. Fendall
an eminent surgeon at Gloucester, he
was salivated, by which the complaint
was considerably lessened for a time;
but yet continued to break out every
spring and autumn until he came to
me, at which time the pustules were
large with red bases, and covered with
dry white scabs. They were almost
contiguous, and appeared in large
patches in various parts of the body,
but mostly upon the arms and legs.
They itched very much, and were not
unlike those sometimes observed in an
inveterate itch, or the remains of the
venereal disease; for which reason per-
haps the surgeon might salivate.
I immediately put him upon a de-
coction of the Elm Bark, half a pint
twice a day, and at the same time or-
dered him some opening medicines to
be taken occasionally, his body being
very costive. He continued these me-
dicines very regularly all that spring,
and

and repeated them the following autumn, and the next spring, by which time he was so far recovered, that, the small remains giving him but uneasiness, he neglected them until the spring of the year 1760. Despairing of his cure, he thought himself happy in the lessy condition he then was; but at my advice, repeating the decoction that one spring, and the next autumn, he was quite cleared of his complaint, and has had no appearance of it ever since.

These cases giving me full satisfaction as to the efficacy of the medicine, I have since, during five years attendance at the Gloucester Infirmary, made it the basis of my practice in a great many mercurial cases with success. But as I there used the warm bath, mercurials, antimonials, and such other assistants, which the convenience of that excellent charity affords, I cannot attribute

attribute the cures performed there to the Elm decoction only.

The proportion of this decoction is, four ounces of the inner Bark, taken fresh from the tree, to two quarts of water, which are to be boiled to one. If the Bark is very rich of the sap, and is boiled too long, the decoction becomes mucilaginous, and is then disagreeable to drink. But when properly made, its taste is that of a pleasant, mild astringent; and an extract made from it is very austere. If the decoction be made in the spring, when the elm is in the blossom, it is of a beautiful light purple colour; but it is browner at other times of the year. The bark I made use of was that next the wood, taken in the spring, from the small, but not the smallest, branches; in the autumn, from the branching roots, as being at that season most full of sap.

M

This

This medicine has been chiefly recommended by authors for external uses; and has had purgative qualities attributed to it. I cannot say I have ever observed them; but, on the contrary, have commonly been obliged to give some purging medicines with the decoction. I have often remarked, that, wherever this method succeeded best, it generally at first increased the efflorescence; which circumstance I usually mentioned before-hand to the patient; lest he, being intimidated by it, as Ann Gardner was, and as many others have been, should not persist in its use long enough to effect a compleat recovery.

Should you think the above observations comprehended within the views of the College, I beg the favour of you to present them, and am,

S I R,

your obliged, humble Servant,

BATH, Dec. 12,
1769.

DANIEL LYSONS.

Since

Since the above letter was published, several instances of the efficacy of a decoction of the Elm Bark have come to my knowledge; of which the following are the most remarkable.

A country physician, who had a very obstinate dry leprosy, and had tried the usual remedies to no purpose, was at last informed, by a brother physician, of the above letter; and, being advised to try the decoction, I afterwards received a letter from him thanking me for the benefit he had received from it.

A friend, with whom I was engaged to drink tea, told me, that a lady, who was a patient of mine from Coventry, was to meet me at his house that afternoon. As I knew I had no patient from Coventry at that time under my care, I could not conceive his meaning; until he explained it by informing me, that, having seen my letter, published in

the medical transactions, she had taken a decoction of the Elm Bark, and was cured of an obstinate scorbutic disorder. The lady afterwards appeared; and, confirming my friends report, I asked, how long she had used the decoction; to which she answered, spring and fall, for two years.

A carpenter, who, spring and fall, had had an eruption in various parts of his body for six years, and which, upon every return, was more violent than the preceding attack, came to me last autumn with a tettery eruption all over his body, so violent as to disable him from work, and confine him to his bed. A purge or two, with an ointment, composed of linimentum album ℥ii. pulv. e cerussa ℥ii, dried up his sores; and the use of the decoction, with a little calomel given occasionally, made the return of his disorder last spring very slight: at present he is entirely free from it, and, I doubt not, will

will continue so, if he repeats the decoction.

A barber, who works with Mr. Orchard in the Abby-Green, had been afflicted many years with an obstinate scorbutic ulcer in his leg: By drinking the Elm decoction, his leg was brought to an healing state, and perfectly cured.

These cases having added to the great opinion I before entertained of the efficacy of the Elm decoction in cutaneous foulnesses, was one reason for my republishing the above letter: and I had also a view of obliging many persons who have been enquiring at the booksellers for my treatise on the Elm Bark, and could not meet with it. By thus again offering this letter to the public, I have reason to expect, that the virtues of the medicine will be more generally known; and its virtues thereby extended to a greater number of distressed objects.

F I N I S

will continue for it the reports the
BOOKS Published by the Author
London, and perfectly cured.

PRACTICAL ESSAYS upon the
Diphtheria, Diphtheria, The
Cott, Diphtheria, and the
London, 1778, Price 2s.

AN ESSAY upon the
CALOMEL in the
Calomel, which is a
upon the Modern Practice of
the whole is dedicated to
Opinion, that the
Seat of a Fever is in the
the whole is dedicated to
the whole is dedicated to



BOOKS Published by the same Author, and
sold by J. WILKIE in *St. Paul's-Church-Yard*,
LONDON.

PRACTICAL ESSAYS upon Intermitting Fevers,
Dropfies, Diseases of the Liver, The Epilepsy, The
Colic, Dysenteric Fluxes, and the Operation of Ca-
lomel. 1772. Price 3s.

An ESSAY upon the *Effects* of CAMPHIRE and
CALOMEL in Continual Fevers, illustrated by sever-
al Cases; to which is added, an occasional Observation
upon the Modern Practice of Inoculation—And from
the whole is deduced an Argument in Support of the
Opinion, that the alimentary Canal is the principal
Seat of a Fever. 1773. *Second Edition*. Price 1s. 6d.



BOOKS Published by the same Author, and
 sold by J. WILKIE in St. Paul's Church-Yard,
 London.

FRACICAL ESSAYS upon Intermittent Fevers,
 Dropsies, Diseases of the Liver, The Epidemic, The
 Colic, Dysenteric Fluxes, and the Operation of Ca-
 lomel. 1772. Price 3s.

AN ESSAY upon the Effects of CAMPHIRE and
 CALOMEL in Continual Fevers, illustrated by fever-
 tal Cases; to which is added, an occasional Observation
 upon the Modern Practice of Inoculation—And from
 the whole is deduced an Argument in Support of the
 Opinion, that the necessary Cause is the principal
 Seat of a Fever. 1773. Second Edition. Price 1s. 6d.